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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,298	02/26/2004	Steven L. Purcell	RIC-03-003	1949
25537	7590	10/06/2005	EXAMINER	
MCI, INC 1133 19TH STREET NW 4TH FLOOR WASHINGTON, DC 20036			MAYO, TARA L	
			ART UNIT	PAPER NUMBER
			3671	

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/786,298

Applicant(s)

PURCELL, STEVEN L.

Examiner

Tara L. Mayo

Art Unit

3671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-13, 23-26, 28, 29, 31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-13, 23-26, 28, 29, 31 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07/28/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 31 is objected to because of the following informalities: dependency upon a canceled claim. In claim 31 on line 1, change the dependency of the claim from claim 30. For the purposes of prosecution on the merits the Examiner has considered the claim to be dependent upon claim 23. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 through 4, 7, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Finzel et al. (U.S. Patent No. 6,371,691 B1).

Finzel et al. '691, as seen in Figures 54 and 55, disclose a method of placing cable beneath a roadway comprising the steps of:
with regard to claim 1,

the steps of cutting a trench (VN) into the surface of the roadway;

placing a duct (VP) in the trench;

filling the trench with a sealer (B);

placing a first cable (MK) with the duct;

Art Unit: 3671

pulling the first cable out of, and through the duct; and

placing a second cable (MK) within the duct without removing the sealer within the trench (col. 26, lines 4 through 21);

with regard to claim 2,

wherein the first cable comprises utility cable;

with regard to claim 3,

wherein the first cable comprises optical fiber cable;

with regard to claim 4,

wherein the trench is cut to a depth of approximately 3.5 to 4.0 inches beneath the surface of the roadway (col. 3, lines 1 through 6);

with regard to claim 7,

wherein the trench is cut to a width of approximately 0.5 inches (col. 3, lines 1 through 6);

with regard to claim 11,

further comprising placing sand (20) within the trench; and

with regard to claim 12,

wherein the sealer comprises bitumen (col. 23, lines 54 through 58).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 3671

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Finzel et al. (U.S. Patent No. 6,371,691 B1).

Finzel et al. '691 disclose all of the limitations of the claimed method with the exception(s) of:

with regard to claim 6,

the duct comprising high density polyethylene (HDPE); and

with regard to claim 13,

the sealer being heated to between approximately 325 and 375 degrees Fahrenheit before filling the trench.

With regard to claim 6, Finzel et al. '691 teach a polyethylene duct (col. 22, lines 10 through 14) but fail to expressly teach high-density polyethylene (HDPE). However, it is a well-known expedient in the art of conduits to use HDPE for ducts surrounding cables in subsurface applications because it possesses good impact strength and chemical resistance.

With regard to claim 13, while Finzel et al. '691 do not expressly teach the claimed temperature range, the limitation is anticipated by the reference because it is inherent to roadway applications requiring the use of hot melt bitumen.

Art Unit: 3671

6. Claims 23, 24, 28, 29, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Finzel et al. (U.S. Patent No. 6,371,691 B1) and Martinez et al. (U.S. Patent Publication No. 2003/0068143).

Finzel et al. '691 teach all of the features of the claimed invention (see paragraph 5) and further teach:

with regard to claim 23,

the duct including a tubular material having a hollow inner diameter within the trench;

with regard to claim 24,

the first cable comprising optical fiber cable; and

with regard to claim 29,

the tubular material comprising an outer diameter of approximately 0.5 inch and an inner diameter of approximately 0.375 inch (col. 2, lines 42 through 56).

Finzel et al. '691 disclose all of the limitations of the claimed method with the exception(s) of:

with regard to claims 23 and 32,

removing the first cable without removing the sealer;

with regard to claim 28,

the duct comprising high density polyethylene (HDPE); and

with regard to claim 31,

Art Unit: 3671

the sealer being heated to between approximately 325 and 375 degrees Fahrenheit before filling the trench.

Martinez et al. '143 disclose a method for providing fiber optic cable through existing service lines wherein a first cable is pulled out and a second one installed without removing overlying earth.

With regard to claims 23 and 32, it would have been obvious to one having ordinary skill in the art of cable laying at the time of invention to modify the method disclosed by Finzel et al. '691 such that the first cable would be pulled without removing the sealer as suggested by Martinez et al. '143. The motivation would have been to prevent disruption of the roadway.

With regard to claim 28, Finzel et al. '691 teach a polyethylene duct (col. 22, lines 10 through 14) but fail to expressly teach high-density polyethylene (HDPE). However, it is a well-known expedient in the art of conduits to use HDPE for ducts surrounding cables in subsurface applications because it possesses good impact strength and chemical resistance.

With regard to claim 31, while Finzel et al. '691 do not expressly teach the claimed temperature range, the limitation is anticipated by the reference because it is inherent to roadway applications requiring the use of hot melt bitumen.

7. Claims 8 through 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Finzel et al. (U.S. Patent No. 6,371,691 B1) and Bantz (U.S. Patent No. 4,554,724).

Finzel et al. '691 disclose all of the steps of the claimed method with the exception(s) of:

Art Unit: 3671

with regard to claim 8,

placing a spacer with the trench on top of the duct;

with regard to claim 9,

the spacer being tubular in shape; and

with regard to claim 10,

the diameter of the space being approximately 25% larger than a width of the trench.

Bantz '724, as seen in Figure 1, shows a tubular spacer (4) placed in a trench (2) above a series of ducts (3) and beneath a sealer (5), wherein the tubular spacer prevents the sealer from contacting the ducts (col. 3, lines 5 through 9).

With regard to claims 8 and 9, it would have been obvious to one having ordinary skill in the art of cable laying at the time the invention was made to modify the method disclosed by Finzel et al. '691 such that it would include the step of placing a spacer in the trench on top of the duct as taught by Bantz '724 for preventing sealer from contacting underlying ducts.

With regard to claim 10, while Finzel et al. '691 and Bantz '724 are silent with regard to the size of the spacer, as seen in Figure 1, it is evident that diameter of the spacer is larger than the width of the trench. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made through routine experimentation and optimization to determine an optimal diameter for the spacer since the same would correspond to desired volume of material placed between the sealer and the duct(s).

Art Unit: 3671

8. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Finzel et al. (U.S. Patent No. 6,371,691 B1) and Martinez et al. (U.S. Patent Publication No. 2003/0068143) as applied to claim 24 above, and further in view of Bantz (U.S. Patent No. 4,554,724).

Finzel et al. '691 as modified by Martinez et al. '143 disclose all of the steps of the claimed method with the exception(s) of:

with regard to claim 25,

placing a spacer with the trench on top of the duct, the spacer comprising water impermeable, heat resistant material; and

with regard to claim 26,

the diameter of the space being approximately 25% larger than a width of the trench.

Bantz '724, as seen in Figure 1, shows a tubular spacer (4) of water impermeable, heat resistant material placed in a trench (2) above a series of ducts (3) and beneath a sealer (5), wherein the tubular spacer prevents the sealer from contacting the ducts (col. 3, lines 5 through 9).

With regard to claim 25, it would have been obvious to one having ordinary skill in the art of cable laying at the time the invention was made to modify the method disclosed by Finzel et al. '691 and Martinez et al. '143 such that it would include the step of placing a spacer in the trench on top of the duct as taught by Bantz '724 for preventing sealer from contacting underlying ducts.

With regard to claim 26, while Finzel et al. '691, Martinez et al. '143 and Bantz '724 are silent with regard to the size of the spacer, as seen in Figure 1, it is evident that diameter of the spacer is larger than the width of the trench. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made through routine experimentation and optimization to determine an optimal diameter for the spacer since the same would correspond to desired volume of material placed between the sealer and the duct(s).

Comments

9. The proposed amendments to the claims after final rejection filed 23 March 2005 have not been entered. The Examiner, however, has considered the remarks filed therewith.

Response to Arguments

10. Applicant's arguments filed 18 July 2005 have been fully considered but they are not persuasive.

In response to Applicant's statement that Finzel '691 fails to teach the steps of "pulling the first cable out of, and through, the duct" and "placing a second cable within the duct without removing the sealer within the trench", the Examiner contends the reference expressly teaches the steps of pulling a first cable through the duct and placing a second cable within the duct without removing the sealer within the trench in the passage set forth in col. 26 at lines 4 through 21. The step of pulling the first cable out of the duct merely requires the cable to be drawn until its end extends beyond the end of the duct and is inherent to the system shown by Finzel '691.

Art Unit: 3671

Otherwise, the cable would be of no use because its end would be inaccessible for subsequent connection.

In response to Applicant's comments regarding the additional teachings of Finzel '691, the Examiner notes the references disclose numerous embodiments which are not relevant to Applicant's claimed invention nor relied upon in the rejections of the claims.

In response to Applicant's statement that Martinez et al. '143 fail to the step of removing a first cable without removing a deposited sealant, the Examiner contends the reference clearly teaches the step and provides motivation for modifying the method disclosed by Finzel '691 to include the same (see para. 0061). Specifically, Applicant's statements arguing the relevance of Martinez et al. '143 because it relates to the installation and removal of fiber optic cable in pre-existing gas lines is not persuasive because the reference was only relied upon in the rejection of claim 23 for a disclosure teaching the step of removing a cable without removing the sealant.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 3671

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tara L. Mayo whose telephone number is 571-272-6992. The examiner can normally be reached on Monday through Friday 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on 571-272-6998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



003 October 2005

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Meredith Petrusich
Primary Examiner
GAU 3671